

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of: Kaddurah-Daouk, R. et al.

Serial No.: 10/695265

Filed: October 27, 2003

For: METHODS FOR DRUG DISCOVERY, DISEASE TREATMENT, AND DIAGNOSIS

**USING METABOLOMICS** 

Attorney Docket No.: MBZ-001CP

Group Art Unit: 1637

Examiner: Not Yet Assigned

MS Amendment Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

Certificate	<u>ot</u>	First	Class	<u>Mailing</u>	<u>(37</u>	CFR	<u> </u>	(a))

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on the date set forth below.

Date of Signature and of Mail Deposit

By:

Elizabeth A. Hanley, Esq. Registration No. 33,505 Attorney for Applicant

## **INFORMATION DISCLOSURE STATEMENT**

Dear Sir:

The present application is a Continuation-in-part Application of U.S. Serial No. 09/835119, filed April 13, 2001 (Atty. Docket No. MBZ-001). Reference ID Nos. A2, A3, A5-A7, A9, A11-A17, A19, A21, A25, B1-B8, B10-B11, B13-B21, B26, C1-C5, C7-C12, C20-C22 listed on the enclosed PTO Form 1449 have been previously cited by or submitted to the Office in the prior application, and, in accordance with 37 CFR §1.98(d), copies of these references are not enclosed herewith, but will be provided upon request. Furthermore, copies of cited U.S. patents and U.S. publications (Reference ID Nos. A1, A4, A8, A10, A18, A20, A22-A24) are not enclosed with this statement.

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This statement is not to be interpreted as a representation that the cited publications are material, that an exhaustive search has been conducted, or that no other relevant information exists. Nor shall the citation of any publication herein be construed *per se* as a representation that such publication is prior art. Moreover, Applicant understands that the Examiner will make an independent evaluation of the cited publications.

Under 37 CFR § 1.97(b)(3), no additional costs are believed to be due in connection with the filing of this disclosure. <u>If, however, a first Office Action on the merits issues in this application bearing a mailing date prior to the date of this Information Disclosure Statement</u>, please charge the appropriate fee as required under 37 CFR §1.17(p) to our Deposit Order Account No. 12-0080.

Respectfully submitted,
LAHIVE & COCKFIELD, LLP

Elizabeth A. Hahley, Esq. Registration No. 33,505 Attorney for Applicant

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MS Amendment Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

Re:

U.S. Patent Application No.: 10/695265

For: METHODS FOR DRUG DISCOVERY, DISEASE TREATMENT, AND

DIAGNOSIS USING METABOLOMICS

Inventor: Kaddurah-Daouk, R. et al.

Filed: October 27, 2003 Our Ref. No.: MBZ-001CP

Dear Sir:

I enclose herewith for filing in the above-identified application the following:

- 1. Information Disclosure Statement;
- 2. PTO Form 1449;
- 3. Copies of selected references cited in PTO Form 1449 (20); and
- 4. A Return Postcard.

No additional costs are believed to be due in connection with the filing of this Information Disclosure Statement. However, please charge any necessary fees in connection with the enclosed statement to our Deposit Order Account No. 12-0080. For this purpose, a duplicate of this sheet is attached.

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Reg. No. 33,505

Respectfully submitted, LAHIVE & COCKFIELD, LLP

Registration No. 33,505

Attorney for Applicant

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GROUP

LIST OF PUBLICATIONS CITED BY APPLICANT (Use several sheets if necessary)

Kaddurah-Daouk, R. et al.

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## **U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A1	4,511,659	04/85	Matson	436	150	
1	A2	4,863,873	09/89	Matson	436	63	
1	A3	5,104,639	04/92	Matson	424	2	
	A4	5,541,310	07/96	Ward et al.	536	23.6	
1	A5	5,565,323	10/96	Parker et al.	435	6	
1	A6	5,824,467	10/98	Mascarenhas	435	4	
1	A7	5,977,083	11/99	Burcoglu	514	44	
	A8	6,004,755	12/99	Wang	435	6	
1	A9	6,087,090	07/00	Mascarenhas	435	4	
	A10	6,168,933 B1	01/01	Kaser et al.	435	91.1	
1	A11	6,190,858 B1	02/01	Persaud et al.	435	4	
1	A12	6,194,217 B1	02/01	Matson	436	63	
1	A13	6,210,970 B1	04/01	Matson	436	64	
1	A14	6,218,117 B1	04/01	Herrnstadt et al.	435	6	
1	A15	6,258,605 B1	07/01	Chace	436	86	
1	A16	6,303,365 B1	10/01	Martin <i>et al</i> .	435	252.3	
1	A17	6,319,668 B1	11/01	Nova et al.	435	6	
	A18	6,326,163 B1	12/01	Forssmann et al.	435	24	
1	A19	6,326,164 B1	12/01	Rice et al.	435	25	
	A20	6,344,322 B1	02/02	Polyak et al.	435	6	i .
1	A21	6,350,588 B1	02/02	Roth et al.	435	34	
	A22	6,376,210 B1	04/02	Yuan	435	18	
	A23	2002/0081626 A1	06/02	Kaddurah-Daouk et al.	435	7.1	
	A24	6,677,160 B1	01/04	Stockman et al.	436	173	

### FOREIGN PATENT DOCUMENTS

Γ			DOCUMENT NUMBER	DATE	Country	CLASS	SUBCLASS	THANS	ATION
L								YES	NO
Γ	1	A25	WO 86/03006 A1	05/86	WO				

OTHERS (including Author, Title, Date, Pertinent Pages, Etc.)

A26	Avery et al. "The use of lipid metabolic profiling to assess the biological impact of marine sewage pollution." Arch Environ Contam Toxicol. 1998 Aug;35(2):229-35						
A27	Brindle et al. "Rapid and noninvasive diagnosis of the presence and severity of coronary heart disease using H-NMR-based metabonomics." Nat Med. 2002 Dec;8(12):1439-44						
Examiner	Date Considered						
*EXAMINER:	Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.						

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ATTY DOCKET NO	SERIAL
MBZ-001CP	10/6

10/695265

LIST OF PUBLICATIONS CITED BY APPLICANT (Use several sheets if necessary)

Kaddurah-Daouk, R. et al.

GROUP

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#### FOREIGN PATENT DOCUMENTS

	Ī	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION		
							YES	NO	
1	B1	WO 92/13273 A1	08/92	WO					
1	B2	WO 93/10802 A1	06/93	WO			Abstr.		
1	В3	WO 96/23075 A1	08/96	WO					
1	B4	WO 98/29563 A1	07/98	WO					
1	B5	WO 98/37423 A1	08/98	WO					
1	B6	WO 99/27361 A1	06/99	WO					
1	В7	WO 99/37786 A2, A3	07/99	WO					
1	B8	WO 99/38013 A2	07/99	WO			Abstr.		
	В9	WO 99/44062 A1	09/99	WO					
1	B10	WO 99/50437 A1	10/99	WO					
1	B11	WO 00/07025 A2, A3	02/00	WO					
	B12	WO 00/09759 A1	02/00	WO					
1	B13	WO 00/51054 A1	08/00	WO	Î				
1	B14	WO 00/55346 A2, A3	09/00	WO					
1	B15	WO 00/65039 A2, A3	11/00	WO					
1	B16	WO 00/65472 A1	11/00	WO					
1	B17	WO 01/00819 A1	01/01	WO					
1	B18	WO 01/09341 A2, A3	02/01	WO					
1	B19	WO 01/09711 A2	02/01	WO					
1	B20	WO 01/18627 A2, A3	03/01	WO	1				
1	B21	WO 01/23330 A2	04/01	WO					

OTHERS (including Author, Title, Date, Pertinent Pages, Etc.)

	B22	Buchholz et al. "Metabolomics: quantification of intracellular metabolite dynamics." Biomol Eng. 2002 Jun;19(1):5-15				
	B23	Glassbrook et al. "Metabolic profiling on the right path." Nat Biotechnol. 2000 Nov;18(11):1142-3				
	B24	Holmes et al. "Metabonomic characterization of genetic variations in toxicological and metabolic responses using probabilistic neural networks." Chem Res Toxicol. 2001 Feb;14(2):182-91				
	B25	Matsumoto et al. "A new chemical diagnostic method for inborn errors of metabolism by mass spectrometry – rapid, practical, and simultaneous urinary metabolites analysis." Mass Spectry Rev 1998;15(1):43-57				
1	B26	Nicholson, J.K. et al. 'Metabonomics': understanding the metabolic responses of living systems to pathophysiological stimuli via multivariate statistical analysis of biological NMR spectroscopic data'. <i>Xenobiotica</i> 1999 Nov;29(11):1181-9				
Exar	miner	Date Considered				
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.						

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GROUP

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#### FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSL	ATION
							YES	NO
1	C1	WO 01/23601 A2, A3	04/01	WO				
1	C2	WO 01/26038 A1	04/01	wo				
1	C3	WO 01/40896 A2, A3	06/01	WO				
1	C4	WO 01/55701 A1	08/01	WO				
1	C5	WO 01/57518 A2	08/01	WO				
	C6	WO 01/55719 A2	08/01	WO				
1	C7	WO 01/69247 A2, A3	09/01	WO				
1	C8	WO 01/73672 A2	10/01	WO				
1	C9	WO 01/79515 A2	10/01	WO				
1	C10	WO 01/84146 A2, A3	11/01	WO				
1	C11	WO 02/04945 A1	01/02	WO				
1	C12	WO 02/04957 A2	01/02	WO				
х	C13	WO 02/052293 A1	07/02	WO				
X	C14	WO 02/086478 A2, A3	10/02	WO				
X	C15	WO 02/086500 A2, A3	10/02	WO				
Х	C16	WO 02/086501 A2, A3	10/02	WO				
X	C17	WO 02/086502 A2	10/02	wo				
X	C18	WO 02/086452 A2, A3	10/02	WO				
x	C19	WO 02/085195 A2, A3	10/02	wo				
1	C20	WO 02/09836 A2	02/02	WO				
1	C21	WO 02/22857 A2	03/02	WO				
1	C22	WO 02/33377 A2	04/02	WO				

OTHERS (including Author, Title, Date, Pertinent Pages, Etc.)

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Examiner		Date Considered
	C26	'Biochemicals Organic Compounds and Diagnostic Reagents.' In Sigma Catalog. 1996, p.253
	C25	Trethewey et al. "Metabolic profiling: a Rosetta Stone for genomics?" Curr Opin Plant Biol. 1999 Apr;2(2):83-5
	C24	Rashed et al. "Screening blood spots for inborn errors of metabolism by electrospray tandem mass spectrometry with a microplate batch process and a computer algorithm for automated flagging of abnormal profiles." Clin Chem. 1997 Jul;43(7):1129-41
	C23	Ning et al. "Gas chromatographic-mass spectrometric metabolic profiling of patients with fatal infantile mitochondrial myopathy with de Toni-Fanconi-Debre syndrome." Acta Paediatr Jpn. 1996 Dec;38(6):661-6